

# McGaffey & Main Ground Water Plume Superfund Site Roswell, New Mexico Chaves County

EPA Region 6  
Congressional District 2

EPA ID# NM0000605386

Site ID: 0605386

Contact: Michael Torres 214-665-2108



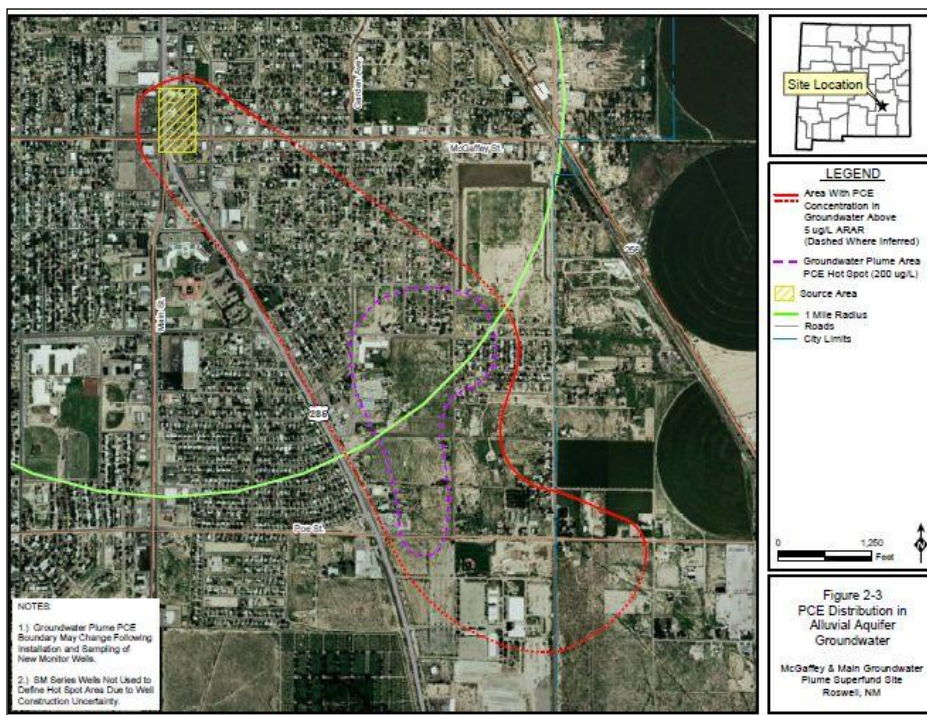
Last Updated: November 2012

## Background

The McGaffey and Main Groundwater Plume site is located near the intersection of South Main Street and McGaffey Street within the city limits of Roswell, Chaves County in southeastern New Mexico. The site spans approximately 500 acres and lies within a commercial and residential area where several dry cleaning businesses operated from approximately 1956-1963. The site consists of a ground water plume that extends about 1.5-miles in a southeasterly direction from the intersection of South Main Street and McGaffey Street.

The McGaffey and Main Groundwater Plume site lies within the northern portion of the Roswell Ground Water Basin (RGB), a two-aquifer system comprised of an unconfined alluvial aquifer overlying an artesian (confined) limestone aquifer. A leaky confining unit separates the two aquifers (Welder, 1983). The top of the artesian aquifer is estimated to lie approximately 200 feet below ground surface (bgs) in the vicinity of the Site.

The contaminant of concern is perchloroethylene (PCE) and it has been detected in the aquifers underlying a portion of downtown Roswell and poses a threat to the municipal and private drinking water supply serving the communities of Roswell. PCE has been found at concentrations that are above the safe levels for indoor air from vapor intrusion and drinking water standards in some wells.



The City of Roswell municipal supply system is composed of 20 municipal supply wells. The system serves a population of approximately 48,000 individuals. Approximately 9,600 individuals receive their drinking water from five City of Roswell municipal wells located within four miles of the site. Eight schools and one hospital are located within one mile of the site.

The Record of Decision was issued on September 30, 2008.

Environmental media that drive the need to take action at the Site include contaminated soil and soil vapor underlying the 1100 block of South Main Street (Source Area); contaminated indoor air resulting from the intrusion of subsurface vapors into buildings overlying the Source Area; and contaminated ground water underlying the Source Area and the Ground Water Plume Area.

The selected remedy removes contaminated soil vapor constituting a low-level threat, but high-risk waste, at the Site. It reduces the concentration of hazardous substances present in ground water through removal and treatment to levels that will allow for limited reuse of Source Area property while the remedial action is underway and unrestricted use of Source Area property when the remedial action is completed.

## **Current Status**

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1. EPA would like to extend its sincere appreciation to all the residents, property owners, business operators, City and County officials and other stakeholders who were helpful and cooperative during the Remedial Investigation (RI) activities.
2. The RI activities indicated that there are some public health risks that need to be addressed as a result of the soil, soil vapor, and ground water contamination present at the McGaffey & Main Ground Water Plume Superfund Site. The site is contaminated with mostly perchloroethylene, a hazardous chemical commonly used in the dry cleaning industry.
3. EPA held an Open House Public Meeting at the Roswell Adult Center on November 29, 2007 to report on the RI and risk assessment findings.
4. EPA released the final Proposed Plan to identify the preferred remedial action alternative to address the contamination at the site and solicit public review and comment on the remedial action alternatives and supporting analysis, at a Public Meeting held on May 29, 2008.
5. EPA completed the public review and comments on the information contained in the Administrative Record File. The Public Comment Period began on May 23, 2008 and ended on June 22, 2008.
6. The Record of Decision (ROD), which documents the preferred selected remedy, was issued on September 30, 2008. The ROD is contained in the Administrative Record File; it is available at the Roswell Public Library and the New Mexico Environment Department in Santa Fe, NM.
7. EPA has awarded a Task Order to a Contractor to perform the Remedial Design phase of the vapor controls and soil vapor extraction system of the cleanup project. The State has the lead in performing the RD of the ground water remedial component.
8. EPA completed the remedial design (RD) phase for construction of a vapor intrusion mitigation system (VIMS) at six building locations that exhibit site-related PCE concentrations in indoor air at levels exceeding the remedial action goal. By implementing this element of the Soil and Soil Vapor and Indoor Air remedial component, unacceptable risks to occupational workers in this area can be mitigated. Construction of the VIMS began in May 2012, and installation of the soil vapor extraction system began in June 2012.

9. EPA began remedial construction activities in April 2012, which included VIMS installations, site preparation, soil vapor extraction well installation and fracturing, trenching, conveyance piping, treatment system construction, and initial start up. Construction completion of the VIMS was achieved in September 2012. A Remedial Completion Report for the VIMS construction was completed on September 28, 2012.

## Benefits

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10. Remediation of the source area and site ground water will reduce the health risk associated with the perchloroethylene contaminants by protecting the indoor air to six commercial buildings, as well as public water supply wells and private residential wells from impacts from the site contaminants.

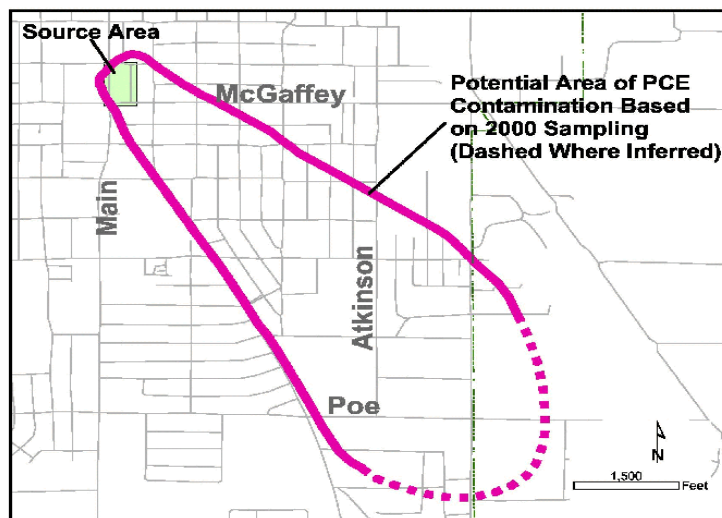
## National Priorities List (NPL) Site History

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- NPL Inclusion Proposal Date: September 13, 2001
  - NPL Inclusion Final Date: October 24, 2002
  - NPL Deletion Proposal Date: n/a
  - NPL Final Deletion Date: n/a
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- The McGaffey and Main Ground Water Plume Superfund Site (Site) is located within the city limits of Roswell, Chaves County, in southeastern New Mexico. The City of Roswell is home to about 45,000 residents, and is the county seat for Chaves County, which has a population of approximately 65,000.
  - The contamination is primarily found in a shallow alluvial aquifer underlying a mixed commercial/retail and residential section of the City of Roswell, about two miles south of the central business district. The site consists of perchloroethene (PCE) contamination that has been identified as a ground water plume that extended about 1.5-miles in a southeasterly direction from the intersection of South Main Street and McGaffey Street.
  - The suspected source of the PCE release is a series of defunct dry cleaning facilities, which operated from approximately 1956-1963. The precise extent of the plume has not yet been identified.
  - The City of Roswell municipal supply system is composed of 20 municipal supply wells. The system serves a population of approximately 48,000 individuals. Approximately 9,600 individuals receive their drinking water from five City of Roswell municipal wells located within four miles of the site.
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11. The primary contaminant of concern is PCE, a chlorinated solvent. PCE has been found at levels up to 19,000 micrograms per liter (µg/L) in the ground water. The Maximum Contaminant Level (MCL) or Federal Drinking Water Standard that is allowed under the Safe Drinking Water Act is 5 µg/L.
  12. Chlorinated solvents are heavier than water and readily sink in ground water. An exact or calculated volume of PCE released into the ground water at the former site of several dry cleaners is unknown at this time. However, very small amounts of these chemicals can contaminate large volumes of soil and ground water.
  13. The primary media affected by PCE contamination is the ground water, although residual contamination is still found in the deep soils. Because the contamination is found only in the

subsurface, it is safe for people to live, work, and visit the area in the immediate vicinity of the former dry-cleaning facilities.

14. The 2001 City of Roswell Annual Drinking Water Quality Report states that the municipal drinking water meets or exceeds all federal and state requirements, which means that the city water is safe to drink. Recent site data also indicate that contamination from the Site is not affecting the City water supply, and will not do so in the near future.



## Human Health and Ecological Considerations

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- There are health risk levels associated with chlorinated hydrocarbon compounds like PCE and some of the breakdown products of that compound. PCE is the leading concern at this site because it is a probable human carcinogen, and because it has been found at concentrations that are above the safe levels for indoor air from vapor intrusion and drinking water standards in some wells.
15. Thirteen of the 16 domestic ground water and irrigation wells downgradient of the site sampled in April through September 2000, contained PCE, some at concentrations higher than the Maximum Contamination Limit (MCL) of 5.0 µg/L. (These wells are not the sole source of water for these residences.)
  16. Three residences in the vicinity of the site whose sole sources of water (including drinking) were found to be contaminated with PCE above the MCL were connected to the city of Roswell municipal water system in 1995.

## Record of Decision

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Record of Decision: This document was issued on September 30, 2008.

## Site Contacts

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